

# Exploring Singapore Primary school students' perceptions of Chinese Asynchronous Online Discussions

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## Abstract

*Background:* Asynchronous online discussion (AOD) has found widespread use in tertiary education and adult learning environment; however, there has been little research on its use in elementary school, especially in the context of the teaching of the Chinese Language. This study explores the use of AOD in a Chinese Language class in a primary school in Singapore.

*Aims:* To investigate

- 1) The perceptions of elementary students toward the use of AOD in the learning of the Chinese Language.
- 2) The factors perceived by students that would encourage them to participate more in the AOD.
- 3) If students perceived that using AOD could help them improve their Chinese writing and reading abilities.
- 4) If students perceived that they thought more in AOD as compared to face-to-face interactions with their classmates, or classroom teaching by the teacher in the learning of the Chinese Language.

*Sample:* A class of 29 primary four students (n=29, 8 boys and 21 girls) with ages between 9-10 years old in Singapore.

*Method:* A qualitative case study methodology was employed. This approach was suitable given that the key purpose of this study was to gain an understanding of students' perceptions towards using AOD in an elementary school Chinese language lesson, rather than to make generalizations or prove/disprove underlying hypotheses. Data collection methods included the use of questionnaire and interviews.

*Results:* Students were generally positive about the use of AOD in the learning of the Chinese Language and felt that their reading and writing abilities had improved. Students perceived that the following factors *if in existence* would encourage them to participate more in the online discussion activities: the posting of the messages (e.g., submitting the messages to the discussion board) is faster, the ability to access internet whenever they want, stronger Chinese language ability, and faster typing skills in Chinese. A majority of the students felt that they thought more in AOD as compared to face-to-face interactions with their peers or classroom teaching by their teacher.

*Conclusion:* The findings revealed that AOD was useful in engaging the students in the learning of the Chinese Language in an elementary school. However, more research has to be done to validate this. Further research can also be done on students with lower ability in the Chinese language.

*Keywords:* Asynchronous Online Discussion, Chinese Language, Primary School Students

## 探索新加坡小学生对中文异步网络讨论的看法

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## 摘要

**背景:** 异步网络在线讨论的方式在大专教育或者成人学习环境的教育方面已经被普遍使用, 然而



在小学教育方面的研究，尤其是小学华文教学方面，却非常稀少。此研究报告主要探讨异步网络在线讨论活动的学习方式在新加坡小学华文班教学上的使用。

- 研究目标、探讨：**1) 小学生对于运用异步网络在线讨论方式学习华文的看法。  
2) 学生乐于使用异步网络在线讨论活动的因素。  
3) 学生是否认为通过使用异步网络在线讨论活动学习华文能提高他们的书写与阅读能力。  
4) 学生是否认为异步网络在线讨论活动比起同学之间面对面的交流和教师在班上提问更能有效地促进思考。

**研究对象：**29 名介于 9 岁至 10 岁小学四年级在籍新加坡学生。

**研究方式：**这项研究是定性个案研究。这样的形式适合此研究报告，因为此研究报告的主要目的是了解小学生对于运用异步网络讨论方式来学习华文的看法，而非概括或要证实任何研究结果。数据的收集方式包括问卷表和对学生进行的访问。

**研究结果：**学生对于使用异步网络讨论活动的华文学习方式有正面的看法。他们认为他们在阅读与写作能力方面有进步。学生认为以下列出的因素会鼓励他们更积极地参与异步网络在线讨论活动：上传信息的速度可以更快，能够随时随地上网，使学生能有更强的华文语言能力，以及更快速的华文打字能力。大部分的学生认为与同学们在班上面对面交流或老师在班上提问相比，异步网络在线讨论活动能使他们思考得更多。

**总结：**研究结果显示异步网络在线讨论活动能有效地激发小学生学习华文的兴趣，然而学者必须在这方面进行更多的探讨与研究。学者也可对华文能力较弱的学生进行这方面的研究来探讨这类学生是否对于异步网络在线讨论持有同样的看法。

**关键词：**异步网络在线讨论、华文、小学生

## Introduction

The benefits of asynchronous online discussion are widely discussed. For example, research has shown that written communication, afforded by asynchronous online discussion, combined with face-to-face communication is more effective than face-to-face communication alone, because it requires more extensive thinking (Woodruff & Brett, 1993). The very process of writing in itself encourages student reflection which helps promote higher level learning such as analysis, synthesis, evaluation as well as clear and precise thinking (Newman, Webb, & Cochran, 1997). In addition, asynchronous online discussion forums are generally available 24 hours a day and seven days a week. This is especially convenient, as they allow student-to-student communications to occur at any time and at any distance (Cheung & Hew, 2005).

Although there are numerous benefits of using asynchronous online discussion in educational contexts, there exist some problems or limitations that would hinder its use. In the study done by Hew and Cheung (2003), for example, the main factor that discouraged student teachers from participating in the asynchronous online discussion was the slow feedback or



responses that students received to their queries or messages. Additionally, students were also frustrated with the low quality postings such as “I agree” statements without further elaborations made by other students (Murphy & Coleman, 2004). Low quality postings can cause other students not to participate in the discussions (Cheung & Hew, 2006). Students would also cease participating in the online discussions because of the use of discussion activities or questions that called for a single, fact-based answer because after one student responds correctly there really is no need for further contribution from other students (Dennen, 2005). Furthermore, some students become lost or disoriented in online discussions because other students may post their ideas or opinions into the wrong discussion threads (Hew & Cheung, 2003). Additionally, students may become disoriented if they post many different ideas into one single message. Consequently, if other students respond to each of these different ideas within the same posting, there is a likelihood that one or more students will lose coherence with the main topic (Winiecki & Chyung, 1998).

Most of the aforementioned limitations are actually designed-related problems that can be resolved by designing the online discussion activity properly. Cheung and Hew (2006) described some ways of overcoming the aforementioned limitations of using asynchronous online discussion. First, there is a need for the teacher or course designer to ensure that all the students and the facilitators know the meaning of discussion. When students are asked to participate in an online discussion, many of them typically do not understand the meaning of “discussion”. Students merely take on the role of a learner doing assignments, where they would typically be contented to simply give their own ideas and opinions to a posted question and not carrying these further; hence the lack of feedback to other individuals’ opinions, or the delay in responding to others. In a discussion, however, the learners are expected to carry out negotiation with one



another to identify problems or issues, clarify issues, generate solutions or ideas, or critique the feasibility of the solutions.

Second, there should also be a pre-discussion activity to ensure that the students' are familiar with using the asynchronous online discussion forum. Instructors, for example, should ensure that students know how to reply to the appropriate discussion thread in order to avoid any disorientation in the discussion. Students should be allowed to have some hands-on experience in initiating discussion threads as well as replying to threads so that they will not post their replies in a wrong thread. This will help reduce the problem of students having difficulty in keeping track of the many discussions on hand. Third, specify ground rules or expectations that explicitly specify students to post only one idea in one posting to minimize the possibility of students introducing various different ideas into one single posting which may later cause students to lose sight of the main discussion topic.

Another critical factor of a successful asynchronous online discussion is the creation of ill-structured problems or issues for the asynchronous online discussion. Ill-structured issues are complex, poorly defined and open-ended. The goals associated with addressing these issues can change from circumstance to circumstance and they are often vague or unstated (Voss, 1988; Voss & Post, 1988) Ill-structured issues may have multiple solutions or no solution at all, and may possess multiple criteria in evaluating their outcome (Kitchner, 1933). They usually require learners to express personal opinions and beliefs about the issues involved and to make judgments about solution paths and outcomes (Jonassen, 1997; Meacham & Emont, 1989), unlike well-defined issues. There is a need to incorporate ill-structured issues in asynchronous discussion because well-defined ones do not satisfy the need for discussion. This is because well-defined issues such as text-book exercises are problems that only called for a single, fact-based



answer since after one student responds correctly there is really no need for further discussion (Dennen, 2005).

This study incorporated the aforementioned suggestions to overcome some of the problems or limitations pertaining to the use of asynchronous online discussion. Hitherto, most research studies on asynchronous online discussion are limited to adult learners and English medium subjects. There is little or few research in the use of asynchronous online discussion in elementary schools and Chinese language education. The current study was done in the context of learners between the ages of nine and ten years old and the medium of language used was Chinese. Hence, the limitations and benefits perceived by students of this age group might be different. An analysis of this research could shed light on the limitations of using asynchronous online discussion as a pedagogical tool and provide a better model using this cognitive tool in the teaching of Chinese language in elementary schools in Singapore.

### **Research Questions**

This study was guided by the following research questions:

- (1) What are students' perceptions of the use of the asynchronous online discussion in the learning of the Chinese Language?
- (2) What are the factors perceived by students that would encourage them to participate more in the asynchronous online discussion?
- (3) Do students perceive that using the asynchronous online discussion can help them to improve their ability in the Chinese language in terms of writing skill and reading skill?



- (4) Do students perceive that they need to think more as compared to other modes of instruction such as face-to face interaction with their classmates, and classroom teaching by the class teacher in the learning of the Chinese language?

### **Methodology**

We used a qualitative case study methodology instead of an experimental or quasi-experiment design. According to Merriam (2001), a case study method is used when the researcher seeks to gain an in-depth understanding of a particular situation. This approach was chosen for this study because its purpose was to obtain an in-depth understanding of the use of asynchronous online discussion in an elementary school Chinese language lesson since there was little research done in this area, rather than using experimental method with control group and large sample sizes to generate predictions or prove or disprove underlying hypotheses.

### *Sample*

A convenience sample of a class of 29 Primary four (grade four) students (8 boys and 21 girls) was chosen to participate in the study. The ages of the students were between nine and ten years. Based on their Chinese language ability, they were of above average ability. The school was a government-funded elementary school in Singapore. The students were taught on how to use Microsoft Pinyin by an external vendor prior to the online discussion in this study. Sixty-nine percent of the students were first time participants in asynchronous online discussions. Although 69% had indicated that they had internet access at home, only 41% indicated that they could access the internet whenever they wished at home. Some of the reasons mentioned by the participants during the focus group interviews for not able to access the internet whenever they



wished were parental objections, the need to do other written homework and elder siblings using the computer.

### *Procedure*

We incorporated the various suggestions extracted from our literature review into the design of our asynchronous online discussion environment. The online discussion environment was implemented in five stages. Throughout the five stages, the 29 students worked in groups of three to four. The student chose their own group members. There were altogether eight groups. Table 1 summarizes the five stages.

- Insert Table 1 here -

In Stage One, the students were introduced to what a discussion should be, as well as the ground rules or expectations of the online discussion and a discussion evaluation rubric. Examples of ground rules or expectations included posting only one idea or opinion per message, talk about issues related to the topic and do not digress, and posting at least three messages per day. The discussion evaluation rubric provided some guidelines for the students to formulate their postings. For example, every message a student posted would earn the particular student a point. An additional point would be given if the author supported his opinions or arguments with evidence, or if the author wrote according to his role (see description of roles later). Using the rubrics, an individual student who earned the highest points would be given a prize. In addition, the points earned by the members of a group would be accumulated and counted as part of the points earned by the particular group. The discussion group with the highest point would be also given a prize. The students evaluated their own postings and gave the appropriate points. This was a form of metacognition where students reflected on their own discussion. However, a



random check of the postings was conducted by the teacher to help ensure that points were correctly given.

Additionally, the students were introduced to four different roles: torch, devil advocate, pigeon, and vacuum cleaner in Stage One. The facilitation of the forum was left to the students as there might be a possibility of dominance of control if the teacher were involved in the forum. For the role of a torch (leader/fire starter/facilitator), the participant was responsible to start a discussion and ensuring that it did not die off. The participant played a role akin to a fire starter. He or she was responsible to start a discussion thread and keep on asking questions, giving evidence and new information in order for the discussion to continue. For the role of a devil, the participant acted as a devil advocate. He or she would keep on challenging the argument of other people, providing alternative views with evidence and information. For the role of the pigeon, the participant was a peace ambassador. He or she helped ensure that the group stayed focus to the question, the group used the grammatically correct language, and group members respected each other. Finally, for the role of the vacuum cleaner, the participant cleared ambiguities or uncertainty related to the discussion by asking people to clarify, or summarize their opinions or comments. The descriptions of the roles of the different members are summarized in Table 2.

- Insert Table 2 here -

In Stage Two, the students were given a short article from about a man who was charged and jailed because he had beaten up a dog which hurt his fiancé. The students were asked to discuss on this article (i.e., to identify the pertinent issues, clarify issues, give opinions or solutions, or critique the feasibility of the opinions or solutions). This whole activity was conducted face-to-face in class and led by the teacher in order to give students an idea what a discussion was.



In Stage Three, the students learned how to use the asynchronous online discussion forum. Students, for example, were taught various skills such as how to post new messages, create threads, read messages, and reply to previous messages. In addition, the students were given a hands-on experience to practise their newly acquired skills. Students were given a short article on Peru's launch of the punctuality campaign. Students were asked to discuss whether the campaign would be successful.

In Stage Four, three discussion activities were conducted. Each activity was designed to be open-ended to allow for the presentation of various different viewpoints and solutions. All three discussion activities were based on dilemma scenarios. According to Jonassen (2000), dilemmas are the most ill-structured kinds of problems because often there is no viewpoint or solution that is satisfying or acceptable to most people, and there are compromises implicit in every possible viewpoint or solution. The three dilemmas employed in the study were taken from local newspaper articles. The teacher briefed the students on the articles before the discussion got underway to help ensure that the primary school students understood the Chinese words and sentences portrayed in the articles. The first dilemma required students to discuss whether a mahjong competition should be held at a local community center. The second dilemma involved the story of a school principal who had taken hostage of his students in order to fight for free education aids and lodgings for the poor in his school from the government. The third dilemma involved the story about a law firm advertising in newspapers in its attempt to find the relatives of a deceased retarded woman who had left an inheritance of \$100 million dollars. The first activity was conducted during the March holidays (one week). The second activity lasted three days and was conducted during term time with one lesson held in the computer laboratory for an



hour long. The third activity lasted three days and was also conducted during term time with two lessons in the computer laboratory.

In Stage Five, a survey and focus group interviews were conducted for all the groups. An analysis was made on the interview data, survey results and the online postings.

### *Data Collection and Evaluation*

A questionnaire survey was conducted to provide an overview of the perception of the students in the study. Focus group interviews were conducted with all groups to provide more in-depth understanding of the perception of the students in using asynchronous online discussion. The two sets of data were triangulated to help enhance the reliability and validity of the findings.

The student questionnaire survey was drawn up based on the design of the asynchronous online discussion and with reference to the main research questions. A Likert-scale of five points was used (5 = Strongly agree, 4 = Agree, 3 = Neutral, 2 = Disagree, and 1 = Strongly disagree). Student focus group interviews were conducted and voice-recorded. Focus groups are group interviews that rely on the interaction within a group of students. This reliance on interaction between the participating students helps to elicit more of the students' viewpoints by allowing a struggle of understanding of how others interpret key ideas and a debate of issues raised (Morgan, 1993). Furthermore, students may feel more at ease when they are in a group, and that could encourage more spontaneity, especially if the students are classmates (Bers, 1994). Eight groups of three or four students participated in the focus group interviews. Interview questions include the following:

- (1) What are the things you like about the discussion activity?
- (2) What are the things you do not like about the discussion activity?



- (3) What makes you want or do not want to participate in the activity?
- (4) Do you think that the online discussion activity has improved your writing ability in Chinese?
- (5) Do you think that the online discussion activity has improved your reading ability in Chinese?
- (6) Do you think that participating in the online activity needs you to think harder than other modes of learning such as group discussion activity in class and teacher questioning class?
- (7) Do you want to continue to have such activities?

After the interviews, member checks of the students' responses were done to ensure the validity of the focus group data.

## **Results**

### *(1) Students' perception of the use of the asynchronous online discussion in the learning of the Chinese Language.*

Table 3 shows the survey results of the perception of students using the asynchronous online discussion in the learning of Chinese Language. The results were positive with 93% indicating that they would like to participate in similar online discussion activities in future. The oral interviews also reflected a strong indication that they enjoyed the activities and would like the teacher to continue to carry out such activities in their learning of Chinese Language. Majority of the students also preferred this mode of instruction as compared to group discussion in class (76%) or teachers' questioning in class (76%). This is consistent with that reflected in the interview. Some of the reasons stated were that they had to depend more on themselves for such activities, and they found it challenging, interesting and fun. Sixty-six percent of students liked the activities because they could participate in the activities whenever they want. Seventy-



two percent indicated that participated in the online discussion because their teacher asked them to do so.

It is interesting to note that less than half of the students agreed that they have participated in the activities because they like their group mates (50%) or because they want to win a prize (46%). This may be an indication that it was the design of the activities that had motivated them to participate in the online discussion activities. In fact, 72% of the participants indicated that they liked the activity. The findings from the oral interviews substantiated these points with many saying that the activities are fun and interesting. For example, some students said that they could learn new things such as using hanyu pinyin to type Chinese characters. Many (66%) felt that their group mates are more outspoken during the online activities than other modes of classroom activities. Some explained during the focus group interviews that they had more chance to voice out their opinion than during classroom discussion. Some mentioned that they were fearful to voice out their opinion during classroom discussion because they were shy or were afraid they would be laughed at. However, students said that they were less fearful during online discussions. Moreover, students said that they were not interrupted when they voiced their opinions, unlike classroom discussions where they were interrupted by their classmates when they were presenting their opinions. This, however, did not occur during the online discussion. The open ended interview questions also provided reasons for their liking, such as: they find that the activity is fun; they can acquire new knowledge; they can learn how to type using the computer; they can learn more about current affairs. One of the students actually commented that because of the activities, he actually started reading the newspapers.

- Insert Table 3 here -



*(2) Factors that would encourage students to participate more in the asynchronous online discussions.*

Table 4 summarizes the factors perceived by students that would encourage them to participate more in the online discussion. Sixty-nine percent of students agreed or strongly agreed that they would participate more if they could access the Internet whenever they wanted. As mentioned previously, not all students could access the internet whenever they wished at home due to parental objections, the need to do homework, and elder siblings using the computer. Students also indicated that they would participate more if the posting of the message (i.e., submitting the messages to the discussion board) was faster (62%), they could type quicker in Chinese (69%), and their Chinese language ability was stronger (79%).

- Insert Table 4 here -

*(3) Do students perceive that using the asynchronous online discussion can help them to improve their ability in the Chinese language in terms of writing skill and reading skill?*

Results pertaining to the students' perceptions of the impact of asynchronous online discussion on their Chinese language ability are presented in Table 5. For example, 76% and 86% of students felt that the asynchronous online discussion activities could help them improve their ability in writing and reading in Chinese respectively.

- Insert Table 5 here -

*(4) Do students perceive that they need to think more as compared to other modes of instruction such as face-to face interaction with their classmates, and classroom questioning by the class teacher in the learning of the Chinese language?*

Results showed that majority of them felt that they think harder using asynchronous online discussion as compared with group face-to-face discussions with their classmate (83%)



and classroom questioning by the class teacher (79%) (see Table 6). The findings from the interview are consistent with the results. Some of the reasons stated were that in asynchronous online discussions, students had to depend on themselves when they posted or answered questions on the discussion platform unlike in class where teachers would help them more.

- Insert Table 6 here -

### **Implications**

Several practical implications for using AOD in a language class may be drawn from the findings of this study. First, results revealed that students, on the whole, enjoyed the AOD activities. These activities were based on dilemma scenarios (Jonassen, 2000) extracted from local newspaper articles. This implies that dilemma scenarios could be a worthwhile discussion activity for students to participate in. This is because dilemma scenarios are open-ended problems or issues that often do not have solutions which are satisfactory to every person, hence allowing every student to contribute their own unique opinions or ideas. This is unlike discussion activities that have only a single, fact-based answer because after one student responds correctly, no further discussion is really necessary. Furthermore, the use of local newspaper articles can help keep students updated about happenings both in Singapore and the whole, thereby increasing their general knowledge of current issues.

Second, if 79% of students indicated that they would participate more in the online discussion activities if their Chinese language ability was stronger, then teachers should provide students with scaffolds. For example, teachers may provide students with some Chinese vocabulary words that are pertinent to the particular article or scenario being discussed. This would help students construct their thoughts and ideas better.



Third, teachers should inform parents about the value of their children participating in the AOD. This would help ameliorate the barrier of some students not being able to access the Internet whenever they wished at home due to parental objections. Some parents may not see the worth of an AOD component in a language lesson. To address this, teachers need to highlight to the parents the importance of an online discussion. For example, teachers may share with parents the findings of this study, as well as findings from prior research that participants have become better at critiquing, questioning, analyzing, and making connections through the use of AOD (Williams, Watkins, Daley, Courtenay, Davis, & Dymock, 2001). Furthermore, AOD can help students who are shy in class to be more outspoken in the online discussion (Groeling, 1999).

### **Conclusion**

In conclusion, the findings showed that the students perceived that the following factors, if in existence, would encourage them to participate more in the online discussion activities: the posting of the messages (e.g., submitting the messages to the discussion board) is faster, the ability to access internet whenever they want, stronger Chinese language ability, and faster typing skills in Chinese.

In addition, findings showed that the students have positive perception for the use of asynchronous online discussion. They found the activity fun and interesting. The students felt that they were able to think more during the online activities as compared with other modes of instruction in the classroom. A majority of them felt that their writing and reading abilities in Chinese had improved after going through these online activities. Students also felt that they had more chance to voice out their opinion than during classroom discussion. They were also less fearful to voice their opinions during online discussions. Moreover, students said that they were



not interrupted when they voiced their opinions, unlike classroom discussions where they were interrupted by their classmates when they were presenting their opinions. We see these results as an indication of the value of adding an AOD component to a language class. In view of such results, we posit that it is worthwhile to continue the practice of using AOD in a Chinese language class.

Although the results were encouraging, there is a need to conduct similar research to test the validity of the research findings. For example, some of the students were not able to freely access the Internet at home. Hence, the effect of the asynchronous online discussion may have been undermined. Moreover, the participants were students with above average ability in the Chinese language. Further research can be done on students with low or average ability in the Chinese language. Because our study was an exploration about children's perceptions of AOD use, we relied mainly on students' self-report data such as student questionnaire and interviews. We acknowledge that one question that people who use AOD in language classes want to answer is whether AOD can actually help improve students' language learning, or students' social skills. The investigation of such variables was beyond the scope of the current study, which mainly examined students' perceptions of AOD use. We therefore suggest that future studies (e.g., experimental designs) be conducted to examine these variables using data sources such as students' marks or grades (to measure their language learning), and observations (to measure students' social interactions with one another).

## References

- Berge, Z. and Collins M. (1993) Computer Conferencing and Online Education. *The Arachnet Electronic Journal on Virtual Culture* 1(3): May 20, 1993.
- Cheung, W. S. & Hew, K.F. (2005). Use of asynchronous online discussion in a hypermedia design class: Students' perceptions. *Proceedings of the ASCILITE Conference, Brisbane, Australia, 139-145.*



- Collins, A., Brown, J.S., & Holum, A. (1991). Cognitive apprenticeship: Making thinking visible. *American Educator*, 6-11, 38-46.
- Cote, P., Chen, S. & Keppell, M. (2005). New Perspectives in Physical Education: Using Online Learning to Promote Collaborative Critical Thinking. In *Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications 2005* (pp. 1989-1994). Chesapeake, VA: AACE.
- Cheung, W. S. & Hew, K.F. (2005). Use of asynchronous online discussion in a hypermedia design class: Students' perceptions. *Proceedings of the ASCILITE Conference, Brisbane, Australia*, 139-145.
- Cheung, W. S. & K. F. Hew (2005). Factors affecting learners' satisfaction on the use of asynchronous online discussion in a hypermedia design environment, *Journal of Southeast Asian Education*. 5 (1&2), 56-70.
- Groeling, T. (1999). *Virtual Discussion: Web-based discussion forums in political science*. Paper presented at the 1999 National Convention of the American Political Science Association, Atlanta, Georgia.
- Harasim, L.M. (1990). Online Education: An Environment for Collaboration and Intellectual Amplification. In Harasim, L. M. (Ed). *Online Education: Perspectives on a New Environment*, 39-64. NY: Praeger Publishing.
- Hew K. F. & Cheung, W.S. (2003). An Exploratory Study on the Use of Asynchronous Online Discussion in Hypermedia Design, *Journal of Instructional Science and Technology*. 6(1).  
<http://www.usq.edu.au/electpub/e-jist/>
- Hew, K. F., & Knapczyk, D. R. (2007). Analysis of Ill-structured Problem-Solving, Mentoring Functions, and Perceptions of Practicum Teachers and Mentors Toward Online Mentoring in a field-based Practicum. *Instructional Science*, 35(1), 1-40.
- Merriam, S. B. (2001). *Qualitative research and case study applications in education*. San Francisco, CA: Jossey-Bass.
- Murphy, E. & Coleman, E.(2004). Graduate students' experiences of challenges related to participation in online asynchronous discussions. *Canadian Journal of Learning and Technology*, 30(2),29-46.
- Piaget, J.-P. (1952). *The origins of intelligence in children*. International Universities Press, New York.
- Williams, S. W., Watkind, K., Daley, B., Courtenay, B., Davis, M., & Dymock, D. (2001). Facilitating cross-cultural online discussion groups: Implications for practice. *Distance Education*, 22(1), 151-167.
- Winiacki, D. J., & Chyung, Y. (1998, August). *Keeping the thread: Helping distance education students and instructors keep track of asynchronous discussions*. Paper presented at the 14<sup>th</sup> Annual Conference on Distance Teaching and Learning, Madison, WI.
- Woodruff, E. & Brett, C. (1993). Fostering scholarly collaboration in young children through the development of electronic commenting. *Research in Education*, 50, 83-95.

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Table 1. Project Implementation Stages and Duration

Stages	Duration	Events
Stage 1 Introduction to the ground rules and evaluation rubrics.	1 hour	Introduction to roles and what is discussion. The students were informed of the ground rules and evaluation rubrics.
Stage 2 Face-to-face discussion practice	1 hour	Students were given a short article about a man who was charged and jailed because he had beaten up a dog who hurt his fiancé. The students were asked to debate on this article by writing on the written paper. This was to give students an idea what a discussion is. A reflection followed by showing the class what had been discussed and highlighting the good and bad points of each discussion by using a visualizer.
Stage 3 How to use the discussion platform and hands-on activity	2 days AOD 1 lab session*	Students learned how to use the discussion platform in the Lead portal. Students were given a short article on Peru's launch of the punctuality campaign. Students were asked to debate on whether the campaign would be successful by using the discussion platform in the Lead portal.
Stage 4a AOD Activity 1	March holidays 1 week	Activity 1 Students were given a short article about a mahjong competition held at a community center. Students were debate whether the mahjong competition should be held using the Lead portal.
Stage 4b AOD Activity 2	Term 2 Week 2 3 days 1 lab session	Activity 2 Students were given a short article from on a pre-primary school principal who had taken hostage of his school children to fight for free education aids and lodgings for the poor in his school from the government. Students debated whether what the principal had done was correct and how should he be punished using the Lead portal.
Stage 4c AOD Activity 3	Term 2 Week 3 3 days 2 lab sessions	Activity 3 Students were given a short article from. The story was about a law firm advertising on newspapers to find the relatives of a deceased retarded woman. The woman had left an inheritance of \$100m dollars. The students debated whether this woman was pitiful in the Lead portal.
Stage 5 Evaluation/Survey	2 hours	Survey, analysis of transcripts of focus group discussion, and online postings.

\*Each lab session lasted 1 hour



Table 2. Roles and Description of the different roles the group members played

<b>Role</b>	<b>Description</b>
Torch (Leader/Fire- Starter /Facilitator)	The role of the participant is like a torch, starting a fire and ensuring that it never dies off. Hence, he or she is to start the thread and keep on asking questions, giving evidence and new information in order for the discussion to continue.
Devil (Devil Advocate)	The role of the participant is like a devil. He or she would keep on challenging the argument of other people, providing alternative views with evidence and information.
Pigeon (Peace Maker / Police)	The role of the participant is like a pigeon, a peace ambassador. He or she will ensure that the group stays focus to the question, the group uses the grammatically correct language, and the group members respect each other.
Vacuum Cleaner (Summarizer/ Resource Manager)	The role of the participant is like a vacuum cleaner, sucking in the information, clearing the air by clarifying, summarizing and concluding.



Table 3. Survey Results – Students' perception

Perception on the Use of AOD in the learning of Chinese Language	Strongly Agree & Agree
I would like to participate in similar online discussion activities in the future.	93%
I like the online discussion activities because I can participate in the activities whenever I want.	66%
I prefer to use the online discussion platform in learning Chinese Language than face to face discussion with group members in class.	76%
I prefer to use the online discussion platform in learning Chinese Language than questioning by the teachers during class.	76%
My group members are more outspoken during the online discussion activities than in group discussion activities with my classmates in class.	66%
My group members are more outspoken during the online discussion activities than questioning by the teachers during class.	66%
I participate in the online discussion activities because my teacher asked me to.	72%
I participate in the online discussion activities because I like the activity.	72%
I participate in the online discussion activities because I want to win a prize.	46%
I participate in the online discussion activities because I like my group members.	50%
I felt that the discussion activities through the online discussion platform can help me improve my ability in writing in Chinese.	76%
I felt that the discussion activities through the online discussion platform can help me improve my ability in reading in Chinese.	86%
I felt that I think harder during the online discussion activities as compared to group discussion activities with my classmates.	83%
I felt that I think harder during the online discussion activities as compared with questioning by teachers in Chinese language lesson.	79%



Table 4. Survey Results – Factors that would encourage students to participate more in asynchronous online discussion

Factors that would encourage students to participate more in asynchronous online discussion	Strongly Agree & Agree
I would participate more in the online discussion activities if the posting of the messages can be done faster in the lead portal.	62%
I would participate more in the online discussion activities if I have internet access whenever I want.	69%
I would participate more in the online discussion activities if I am able to type faster in Chinese.	69%
I would participate more in the online discussion activities if my Chinese language ability is stronger.	79%

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